Applied Magnetic Resonance 2014 vol.45 N11, pages 1141-1146

# Theory for the gaussian component of the 63Cu nuclear spin-echo decay rate 1/T2G in La2-xSrxCuO4

Larionov I.

*Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia*

## Abstract

© Springer-Verlag Wien 2014. We report calculations of the Gaussian component of the 63Cu nuclear spin-echo decay rate 1/T2G employing the theory for spin susceptibility as derived within the t-J model starting from carrier-free La2CuO4 and right up to optimally doped superconducting layered copper oxide La2-xSrxCuO4. The theory reproduces the temperature and doping behavior of the experimental data for 1/T2G. A quantitative agreement with experimental 1/T2G data in doped La2-xSrxCuO4 compounds is obtained with account of both the spin–spin and “fermion”–“fermion” correlations.

http://dx.doi.org/10.1007/s00723-014-0575-x